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A ABSTRACT OF THE DISCLOSURE

Disclosed is a fiber-optic laser comprising a birefringent optic fiber possessing a Bragg grating at each of its ends. A light source emits a light beam having two modes of polarization in the fiber. The birefringence of the fiber makes it possible to keep the two polarization modes separate. The two Bragg gratings are photo-recorded in the fiber and are made in such a way that their resonance wavelength is matched for one polarization. The wave emitted by the fiber is then polarized linearly along P1. Applications to linearly polarized lasers for optical transmission, instrumentation, spectroscopy, medicine, the detection of chemical species and telemetry.

a Figure 1.